IN THE CLAIMS:

1.—15. (Canceled)

16. (Currently Amended) A method for loosening a threaded connection on a tubular member, comprising:

lowering a back-off tool through the tubular member to a position substantially proximate the threaded connection, wherein the back-off tool comprises two or more sonic wave generators, each having at least one of a piezoelectric ceramic, a piezoelectric crystal, a magnetostrictive material, and a stack of piezoelectric plates;

activating the two or more sonic wave generators simultaneously to cause the sonic wave generator to generate sonic waves; and

setting the tubular member to a neutral weight position at the threaded connection above a sticking condition.

17. (Original) The method of claim 16, wherein the sonic waves are configured to loosen the threaded connection.

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Original) The method of claim 16, further comprising applying a reverse torque to the tubular member.

22. (Canceled)

23. (Original) The method of claim 16, wherein the back-off tool is activated while moving a neutral weight position up and down the tubular member.

24. (Currently Amended) A method for loosening a threaded connection on a tubular member, comprising:

lowering a back-off tool through the tubular member to a position substantially proximate the threaded connection, wherein the back-off tool comprises a sonic wave generator having at least one of a piezoelectric ceramic, a piezoelectric crystal, a magnetostrictive material, and a stack of piezoelectric plates; and

activating the sonic wave generator to generate sonic waves while reciprocating the tubular member.

25. (Canceled)

26. (Currently Amended) A method for backing-off an upper portion of a tubular member joined to a lower portion of the tubular member by a threaded connection in a wellbore, comprising:

applying a reverse torque to the upper portion of the tubular member;

lowering a back-off tool through the tubular member to a position substantially proximate the threaded connection, wherein the back-off tool comprises a sonic wave generator having at least one of a piezoelectric ceramic, a piezoelectric crystal, a magnetostrictive material, and a stack of piezoelectric plates; and

generating sonic waves through the back-off tool to loosen the threaded connection, while moving a neutral weight position along the tubular member.

27. (Cancelled)

28. (Original) The method of claim 26, further comprising activating the back-off tool to generate the sonic waves.

29. (Previously Presented) The method of claim 26, further comprising setting the tubular member to the neutral weight position at the threaded connection above a sticking condition.

30. (Cancelled)

31. (Canceled)

32. (Original) The method of claim 26, further comprising varying one or more frequencies of the sonic waves.

33. (Original) The method of claim 26, further comprising retrieving the upper portion from the wellbore.

34–40. (Canceled)

41. (Currently Amended) A method for loosening a threaded connection on a tubular member, comprising:

lowering a back-off tool through the tubular member to a position substantially proximate the threaded connection, wherein the back-off tool comprises a sonic wave generator having at least one of a piezoelectric ceramic, a piezoelectric crystal, a magnetostrictive material, and a stack of piezoelectric plates; and

activating the back-off tool to cause the sonic wave generator to generate sonic waves, while moving a neutral weight position up and down the tubular member.

42. (Canceled)

43. (Canceled)

44. (Currently Amended) A method for loosening a threaded connection on a tubular member, comprising:

lowering a back-off tool through the tubular member to a position substantially proximate the threaded connection, wherein the back-off tool comprises two or more sonic wave generators, each having at least one of piezoelectric ceramic, a piezoelectric crystal, a magnetostrictive material, and a stack of piezoelectric plates; and

activating the two or more sonic wave generators simultaneously to cause the sonic wave generator to generate sonic waves,

wherein the back-off tool is activated while moving a neutral weight position up and down the tubular member.

45. (Previously Presented) The method of claim 44, wherein the sonic waves are configured to loosen the threaded connection.

46. (Previously Presented) The method of claim 44, further comprising applying a reverse torque to the tubular member.

47. (New) The method of claim 16, wherein each sonic wave generator has at least one of the piezoelectric ceramic and the stack of piezoelectric plates.

48. (New) The method of claim 16, wherein each sonic generator has at least one of the piezoelectric crystal, ceramic, and stack and the piezoelectric crystal, ceramic, or stack is made from barium titanate or quartz.

49. (New) The method of claim 16, wherein each sonic wave generator has the stack of piezoelectric plates and the piezoelectric plates are made from wafers of at least one of quartz, lithium niobate, lithium tantalite, and ceramics.

50. (New) The method of claim 49, further comprising cutting the piezoelectric plates generally in the x crystal axis direction.

51. (New) The method of claim 50, further comprising depositing the piezoelectric plates with a silver alloy; stacking the piezoelectric plates; and melting the silver alloy under a vacuum while applying pressure to the stack.

52. (New) The method of claim 24, wherein the sonic wave generator has at least one of the piezoelectric ceramic and the stack of piezoelectric plates.

53. (New) The method of claim 24, wherein the sonic generator has at least one of the piezoelectric crystal, ceramic, and stack and the piezoelectric crystal, ceramic, or stack is made from barium titanate or quartz.

54. (New) The method of claim 24, wherein the sonic wave generator has the stack of piezoelectric plates and the piezoelectric plates are made from wafers of at least one of quartz, lithium niobate, lithium tantalite, and ceramics.

55. (New) The method of claim 54, further comprising cutting the piezoelectric plates generally in the x crystal axis direction.

56. (New) The method of claim 55, further comprising depositing the piezoelectric plates with a silver alloy; stacking the piezoelectric plates; and melting the silver alloy under a vacuum while applying pressure to the stack.

57. (New) The method of claim 26, wherein the sonic wave generator has at least one of the piezoelectric ceramic and the stack of piezoelectric plates.

58. (New) The method of claim 26, wherein the sonic generator has at least one of the piezoelectric crystal, ceramic, and stack and the piezoelectric crystal, ceramic, or stack is made from barium titanate or quartz.

59. (New) The method of claim 26, wherein the sonic wave generator has the stack of piezoelectric plates and the piezoelectric plates are made from wafers of at least one of quartz, lithium niobate, lithium tantalite, and ceramics.

60. (New) The method of claim 59, further comprising cutting the piezoelectric plates generally in the x crystal axis direction.

61. (New) The method of claim 60, further comprising depositing the piezoelectric plates with a silver alloy; stacking the piezoelectric plates; and melting the silver alloy under a vacuum while applying pressure to the stack.

62. (New) The method of claim 41, wherein the sonic wave generator has at least one of the piezoelectric ceramic and the stack of piezoelectric plates.

63. (New) The method of claim 41, wherein the sonic generator has at least one of the piezoelectric crystal, ceramic, and stack and the piezoelectric crystal, ceramic, or stack is made from barium titanate or quartz.

64. (New) The method of claim 41, wherein the sonic wave generator has the stack of piezoelectric plates and the piezoelectric plates are made from wafers of at least one of quartz, lithium niobate, lithium tantalite, and ceramics.

65. (New) The method of claim 64, further comprising cutting the piezoelectric plates generally in the x crystal axis direction.

66. (New) The method of claim 65, further comprising depositing the piezoelectric plates with a silver alloy; stacking the piezoelectric plates; and melting the silver alloy under a vacuum while applying pressure to the stack.

67. (New) The method of claim 44, wherein the sonic wave generator has at least one of the piezoelectric ceramic and the stack of piezoelectric plates.

68. (New) The method of claim 44, wherein the sonic generator has at least one of the piezoelectric crystal, ceramic, and stack and the piezoelectric crystal, ceramic, or stack is made from barium titanate or quartz.

69. (New) The method of claim 44, wherein the sonic wave generator has the stack of piezoelectric plates and the piezoelectric plates are made from wafers of at least one of quartz, lithium niobate, lithium tantalite, and ceramics.

70. (New) The method of claim 69, further comprising cutting the piezoelectric plates generally in the x crystal axis direction.

71. (New) The method of claim 70, further comprising depositing the piezoelectric plates with a silver alloy; stacking the piezoelectric plates; and melting the silver alloy under a vacuum while applying pressure to the stack.

72. (New) The method of claim 16, further comprising varying one or more frequencies of the sonic waves.

73. (New) The method of claim 24, further comprising varying one or more frequencies of the sonic waves.

74. (New) The method of claim 41, further comprising varying one or more frequencies of the sonic waves.

75. (New) The method of claim 44, further comprising varying one or more frequencies of the sonic waves.

IN THE CLAIMS:

1.—15. (Canceled)

16. (Currently Amended) A method for loosening a threaded connection on a tubular member, comprising:

lowering a back-off tool through the tubular member to a position substantially proximate the threaded connection, wherein the back-off tool comprises two or more sonic wave generators, each having at least one of a piezoelectric ceramic, a piezoelectric crystal, a magnetostrictive material, and a stack of piezoelectric plates;

activating the two or more sonic wave generators simultaneously to cause the sonic wave generator to generate sonic waves; and

setting the tubular member to a neutral weight position at the threaded connection above a sticking condition.

17. (Original) The method of claim 16, wherein the sonic waves are configured to loosen the threaded connection.

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Original) The method of claim 16, further comprising applying a reverse torque to the tubular member.

22. (Canceled)

23. (Original) The method of claim 16, wherein the back-off tool is activated while moving a neutral weight position up and down the tubular member.

24. (Currently Amended) A method for loosening a threaded connection on a tubular member, comprising:

lowering a back-off tool through the tubular member to a position substantially proximate the threaded connection, wherein the back-off tool comprises a sonic wave generator having at least one of a piezoelectric ceramic, a piezoelectric crystal, a magnetostrictive material, and a stack of piezoelectric plates; and

activating the sonic wave generator to generate sonic waves while reciprocating the tubular member.

25. (Canceled)

26. (Currently Amended) A method for backing-off an upper portion of a tubular member joined to a lower portion of the tubular member by a threaded connection in a wellbore, comprising:

applying a reverse torque to the upper portion of the tubular member;

lowering a back-off tool through the tubular member to a position substantially proximate the threaded connection, wherein the back-off tool comprises a sonic wave generator having at least one of a piezoelectric ceramic, a piezoelectric crystal, a magnetostrictive material, and a stack of piezoelectric plates; and

generating sonic waves through the back-off tool to loosen the threaded connection, while moving a neutral weight position along the tubular member.

27. (Cancelled)

28. (Original) The method of claim 26, further comprising activating the back-off tool to generate the sonic waves.

29. (Previously Presented) The method of claim 26, further comprising setting the tubular member to the neutral weight position at the threaded connection above a sticking condition.

30. (Cancelled)

31. (Canceled)

32. (Original) The method of claim 26, further comprising varying one or more frequencies of the sonic waves.

33. (Original) The method of claim 26, further comprising retrieving the upper portion from the wellbore.

34--40. (Canceled)

41. (Currently Amended) A method for loosening a threaded connection on a tubular member, comprising:

lowering a back-off tool through the tubular member to a position substantially proximate the threaded connection, wherein the back-off tool comprises a sonic wave generator having at least one of a piezoelectric ceramic, a piezoelectric crystal, a magnetostrictive material, and a stack of piezoelectric plates; and

activating the back-off tool to cause the sonic wave generator to generate sonic waves, while moving a neutral weight position up and down the tubular member.

42. (Canceled)

43. (Canceled)

44. (Currently Amended) A method for loosening a threaded connection on a tubular member, comprising:

lowering a back-off tool through the tubular member to a position substantially proximate the threaded connection, wherein the back-off tool comprises two or more sonic wave generators, each having at least one of piezoelectric ceramic, a piezoelectric crystal, a magnetostrictive material, and a stack of piezoelectric plates; and

activating the two or more sonic wave generators simultaneously to cause the sonic wave generator to generate sonic waves,

wherein the back-off tool is activated while moving a neutral weight position up and down the tubular member.

45. (Previously Presented) The method of claim 44, wherein the sonic waves are configured to loosen the threaded connection.

46. (Previously Presented) The method of claim 44, further comprising applying a reverse torque to the tubular member.

47. (New) The method of claim 16, wherein each sonic wave generator has at least one of the piezoelectric ceramic and the stack of piezoelectric plates.

48. (New) The method of claim 16, wherein each sonic generator has at least one of the piezoelectric crystal, ceramic, and stack and the piezoelectric crystal, ceramic, or stack is made from barium titanate or quartz.

49. (New) The method of claim 16, wherein each sonic wave generator has the stack of piezoelectric plates and the piezoelectric plates are made from wafers of at least one of quartz, lithium niobate, lithium tantalite, and ceramics.

50. (New) The method of claim 49, further comprising cutting the piezoelectric plates generally in the x crystal axis direction.

51. (New) The method of claim 50, further comprising depositing the piezoelectric plates with a silver alloy; stacking the piezoelectric plates; and melting the silver alloy under a vacuum while applying pressure to the stack.

52. (New) The method of claim 24, wherein the sonic wave generator has at least one of the piezoelectric ceramic and the stack of piezoelectric plates.

53. (New) The method of claim 24, wherein the sonic generator has at least one of the piezoelectric crystal, ceramic, and stack and the piezoelectric crystal, ceramic, or stack is made from barium titanate or quartz.

54. (New) The method of claim 24, wherein the sonic wave generator has the stack of piezoelectric plates and the piezoelectric plates are made from wafers of at least one of quartz, lithium niobate, lithium tantalite, and ceramics.

55. (New) The method of claim 54, further comprising cutting the piezoelectric plates generally in the x crystal axis direction.

56. (New) The method of claim 55, further comprising depositing the piezoelectric plates with a silver alloy; stacking the piezoelectric plates; and melting the silver alloy under a vacuum while applying pressure to the stack.

57. (New) The method of claim 26, wherein the sonic wave generator has at least one of the piezoelectric ceramic and the stack of piezoelectric plates.

58. (New) The method of claim 26, wherein the sonic generator has at least one of the piezoelectric crystal, ceramic, and stack and the piezoelectric crystal, ceramic, or stack is made from barium titanate or quartz.

59. (New) The method of claim 26, wherein the sonic wave generator has the stack of piezoelectric plates and the piezoelectric plates are made from wafers of at least one of quartz, lithium niobate, lithium tantalite, and ceramics.

60. (New) The method of claim 59, further comprising cutting the piezoelectric plates generally in the x crystal axis direction.

61. (New) The method of claim 60, further comprising depositing the piezoelectric plates with a silver alloy; stacking the piezoelectric plates; and melting the silver alloy under a vacuum while applying pressure to the stack.

62. (New) The method of claim 41, wherein the sonic wave generator has at least one of the piezoelectric ceramic and the stack of piezoelectric plates.

63. (New) The method of claim 41, wherein the sonic generator has at least one of the piezoelectric crystal, ceramic, and stack and the piezoelectric crystal, ceramic, or stack is made from barium titanate or quartz.

64. (New) The method of claim 41, wherein the sonic wave generator has the stack of piezoelectric plates and the piezoelectric plates are made from wafers of at least one of quartz, lithium niobate, lithium tantalite, and ceramics.

65. (New) The method of claim 64, further comprising cutting the piezoelectric plates generally in the x crystal axis direction.

66. (New) The method of claim 65, further comprising depositing the piezoelectric plates with a silver alloy; stacking the piezoelectric plates; and melting the silver alloy under a vacuum while applying pressure to the stack.

67. (New) The method of claim 44, wherein the sonic wave generator has at least one of the piezoelectric ceramic and the stack of piezoelectric plates.

68. (New) The method of claim 44, wherein the sonic generator has at least one of the piezoelectric crystal, ceramic, and stack and the piezoelectric crystal, ceramic, or stack is made from barium titanate or quartz.

69. (New) The method of claim 44, wherein the sonic wave generator has the stack of piezoelectric plates and the piezoelectric plates are made from wafers of at least one of quartz, lithium niobate, lithium tantalite, and ceramics.

70. (New) The method of claim 69, further comprising cutting the piezoelectric plates generally in the x crystal axis direction.

71. (New) The method of claim 70, further comprising depositing the piezoelectric plates with a silver alloy; stacking the piezoelectric plates; and melting the silver alloy under a vacuum while applying pressure to the stack.

72. (New) The method of claim 16, further comprising varying one or more frequencies of the sonic waves.

73. (New) The method of claim 24, further comprising varying one or more frequencies of the sonic waves.

74. (New) The method of claim 41, further comprising varying one or more frequencies of the sonic waves.

75. (New) The method of claim 44, further comprising varying one or more frequencies of the sonic waves.

IN THE CLAIMS:

1.—15. (Canceled)

16. (Currently Amended) A method for loosening a threaded connection on a tubular member, comprising:

lowering a back-off tool through the tubular member to a position substantially proximate the threaded connection, wherein the back-off tool comprises two or more sonic wave generators, each having at least one of a piezoelectric ceramic, a piezoelectric crystal, a magnetostrictive material, and a stack of piezoelectric plates;

activating the two or more sonic wave generators simultaneously to cause the sonic wave generator to generate sonic waves; and

setting the tubular member to a neutral weight position at the threaded connection above a sticking condition.

17. (Original) The method of claim 16, wherein the sonic waves are configured to loosen the threaded connection.

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Original) The method of claim 16, further comprising applying a reverse torque to the tubular member.

22. (Canceled)

23. (Original) The method of claim 16, wherein the back-off tool is activated while moving a neutral weight position up and down the tubular member.

24. (Currently Amended) A method for loosening a threaded connection on a tubular member, comprising:

lowering a back-off tool through the tubular member to a position substantially proximate the threaded connection, wherein the back-off tool comprises a sonic wave generator having at least one of a piezoelectric ceramic, a piezoelectric crystal, a magnetostrictive material, and a stack of piezoelectric plates; and

activating the sonic wave generator to generate sonic waves while reciprocating the tubular member.

25. (Canceled)

26. (Currently Amended) A method for backing-off an upper portion of a tubular member joined to a lower portion of the tubular member by a threaded connection in a wellbore, comprising:

applying a reverse torque to the upper portion of the tubular member;

lowering a back-off tool through the tubular member to a position substantially proximate the threaded connection, wherein the back-off tool comprises a sonic wave generator having at least one of a piezoelectric ceramic, a piezoelectric crystal, a magnetostrictive material, and a stack of piezoelectric plates; and

generating sonic waves through the back-off tool to loosen the threaded connection, while moving a neutral weight position along the tubular member.

27. (Cancelled)

28. (Original) The method of claim 26, further comprising activating the back-off tool to generate the sonic waves.

29. (Previously Presented) The method of claim 26, further comprising setting the tubular member to the neutral weight position at the threaded connection above a sticking condition.

30. (Cancelled)

31. (Canceled)

32. (Original) The method of claim 26, further comprising varying one or more frequencies of the sonic waves.

33. (Original) The method of claim 26, further comprising retrieving the upper portion from the wellbore.

34--40. (Canceled)

41. (Currently Amended) A method for loosening a threaded connection on a tubular member, comprising:

lowering a back-off tool through the tubular member to a position substantially proximate the threaded connection, wherein the back-off tool comprises a sonic wave generator having at least one of a piezoelectric ceramic, a piezoelectric crystal, a magnetostrictive material, and a stack of piezoelectric plates; and

activating the back-off tool to cause the sonic wave generator to generate sonic waves, while moving a neutral weight position up and down the tubular member.

42. (Canceled)

43. (Canceled)

44. (Currently Amended) A method for loosening a threaded connection on a tubular member, comprising:

lowering a back-off tool through the tubular member to a position substantially proximate the threaded connection, wherein the back-off tool comprises two or more sonic wave generators, each having at least one of piezoelectric ceramic, a piezoelectric crystal, a magnetostrictive material, and a stack of piezoelectric plates; and

activating the two or more sonic wave generators simultaneously to cause the sonic wave generator to generate sonic waves,

wherein the back-off tool is activated while moving a neutral weight position up and down the tubular member.

45. (Previously Presented) The method of claim 44, wherein the sonic waves are configured to loosen the threaded connection.

46. (Previously Presented) The method of claim 44, further comprising applying a reverse torque to the tubular member.

47. (New) The method of claim 16, wherein each sonic wave generator has at least one of the piezoelectric ceramic and the stack of piezoelectric plates.

48. (New) The method of claim 16, wherein each sonic generator has at least one of the piezoelectric crystal, ceramic, and stack and the piezoelectric crystal, ceramic, or stack is made from barium titanate or quartz.

49. (New) The method of claim 16, wherein each sonic wave generator has the stack of piezoelectric plates and the piezoelectric plates are made from wafers of at least one of quartz, lithium niobate, lithium tantalite, and ceramics.

50. (New) The method of claim 49, further comprising cutting the piezoelectric plates generally in the x crystal axis direction.

51. (New) The method of claim 50, further comprising depositing the piezoelectric plates with a silver alloy; stacking the piezoelectric plates; and melting the silver alloy under a vacuum while applying pressure to the stack.

52. (New) The method of claim 24, wherein the sonic wave generator has at least one of the piezoelectric ceramic and the stack of piezoelectric plates.

53. (New) The method of claim 24, wherein the sonic generator has at least one of the piezoelectric crystal, ceramic, and stack and the piezoelectric crystal, ceramic, or stack is made from barium titanate or quartz.

54. (New) The method of claim 24, wherein the sonic wave generator has the stack of piezoelectric plates and the piezoelectric plates are made from wafers of at least one of quartz, lithium niobate, lithium tantalite, and ceramics.

55. (New) The method of claim 54, further comprising cutting the piezoelectric plates generally in the x crystal axis direction.

56. (New) The method of claim 55, further comprising depositing the piezoelectric plates with a silver alloy; stacking the piezoelectric plates; and melting the silver alloy under a vacuum while applying pressure to the stack.

57. (New) The method of claim 26, wherein the sonic wave generator has at least one of the piezoelectric ceramic and the stack of piezoelectric plates.

58. (New) The method of claim 26, wherein the sonic generator has at least one of the piezoelectric crystal, ceramic, and stack and the piezoelectric crystal, ceramic, or stack is made from barium titanate or quartz.

59. (New) The method of claim 26, wherein the sonic wave generator has the stack of piezoelectric plates and the piezoelectric plates are made from wafers of at least one of quartz, lithium niobate, lithium tantalite, and ceramics.

60. (New) The method of claim 59, further comprising cutting the piezoelectric plates generally in the x crystal axis direction.

61. (New) The method of claim 60, further comprising depositing the piezoelectric plates with a silver alloy; stacking the piezoelectric plates; and melting the silver alloy under a vacuum while applying pressure to the stack.

62. (New) The method of claim 41, wherein the sonic wave generator has at least one of the piezoelectric ceramic and the stack of piezoelectric plates.

63. (New) The method of claim 41, wherein the sonic generator has at least one of the piezoelectric crystal, ceramic, and stack and the piezoelectric crystal, ceramic, or stack is made from barium titanate or quartz.

64. (New) The method of claim 41, wherein the sonic wave generator has the stack of piezoelectric plates and the piezoelectric plates are made from wafers of at least one of quartz, lithium niobate, lithium tantalite, and ceramics.

65. (New) The method of claim 64, further comprising cutting the piezoelectric plates generally in the x crystal axis direction.

66. (New) The method of claim 65, further comprising depositing the piezoelectric plates with a silver alloy; stacking the piezoelectric plates; and melting the silver alloy under a vacuum while applying pressure to the stack.

67. (New) The method of claim 44, wherein the sonic wave generator has at least one of the piezoelectric ceramic and the stack of piezoelectric plates.

68. (New) The method of claim 44, wherein the sonic generator has at least one of the piezoelectric crystal, ceramic, and stack and the piezoelectric crystal, ceramic, or stack is made from barium titanate or quartz.

69. (New) The method of claim 44, wherein the sonic wave generator has the stack of piezoelectric plates and the piezoelectric plates are made from wafers of at least one of quartz, lithium niobate, lithium tantalite, and ceramics.

70. (New) The method of claim 69, further comprising cutting the piezoelectric plates generally in the x crystal axis direction.

71. (New) The method of claim 70, further comprising depositing the piezoelectric plates with a silver alloy; stacking the piezoelectric plates; and melting the silver alloy under a vacuum while applying pressure to the stack.

72. (New) The method of claim 16, further comprising varying one or more frequencies of the sonic waves.

73. (New) The method of claim 24, further comprising varying one or more frequencies of the sonic waves.

74. (New) The method of claim 41, further comprising varying one or more frequencies of the sonic waves.

75. (New) The method of claim 44, further comprising varying one or more frequencies of the sonic waves.